CLAIMS:



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- 1. A system for management and control of multimedia communications resources comprising:
 - (a) communications pathway;
- (b) an originating multimedia computing device coupled to said communications pathway with desired quality of service requirements;
- (c) one or more destination multimedia computing devices coupled to said communications pathway;
- (d) one or more quality of service management components coupled to said communications pathway; wherein said quality of service management components determines communications pathway resource availability for multimedia communications with said desired quality of service requirements in response to a request from said originating multimedia computing device to establish communications with said destination multimedia computing devices.
- 2. The system of claim 1 wherein said quality of service management components includes at least one resource status database.
- 3. The system of claim 1 wherein said quality of service management components includes a plurality of resource status databases coupled to said communications pathway.
- 25 4. The system of claim 3 wherein said quality of service management components further includes at least one communications server coupled to said communications pathway; and at least one quality of service management server coupled to said communications pathway.

- 5. The system of claim 4 wherein said originating multimedia communications device and each said destination computing devices include executable software QOS caller modules.
- 5 6. The system of claim 4 wherein said communications server include executable software QOS comm modules.
 - 7. The system of claim 1 wherein said desired quality of service includes bandwidth requirements.
 - 8. A method of management and control of resources for multimedia communications comprising the steps of:
 - (a) generating a request from an originating multimedia computing device to a quality of service management component for establishment of multimedia communications with one or more destination multimedia communications devices over a communications pathway with a desired quality of service;
 - (b) issuing a query of available service quality of resources from said quality of service management component to one or more resource status databases;
 - (c) issuing replies from said resource status databases to said quality of service management component on said available service quality of resources;
- (d) processing said replies by said quality of service management component to determine availability of said desired quality of service with said features;
 - (e) sending a positive or negative response to said originating multimedia desktop device from said quality of service management component corresponding to said request on said establishment of multimedia communications.



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- 9. The method of claim 8 including the further step of establishing a connection with said originating multimedia communications device to said destination multimedia computing device to establish said communications at said desired quality of service upon receipt of said positive response.
- 10. The method of claim 8 including the further step of taking alternative action by said originating multimedia communications device upon receipt of said negative response.
- 10 11. The method of claim 10 wherein said alternative action includes employing a call back feature.
 - 12. A method of management and control of resources for multimedia communications comprising the steps of:
 - (a) generating a first request from an originating multimedia computing device to a communications server for establishment of multimedia communications with one or more destination multimedia communications devices over a communications pathway with a desired quality of service;
 - (b) determining features of said multimedia communications for said desired quality of service by said communications server;
 - (c) issuing a second request from said communications server to a quality of service management server for said desired quality of service with said features;
- 25 (d) issuing a query of available service quality of resources from said quality of service management server to one or more resource status databases;
 - (e) issuing replies from said resource status databases to said quality of service manager on said available service quality of resources;
- 30 (f) processing said replies by said quality of service manager to determine availability of said desired quality of service with said features;



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- (g) generating a first response from said quality of service manager to said communications server in response to said second request;
- (h) sending a second response to said originating multimedia desktop device from said communications server in response to said first request on said establishment of multimedia communications.
- 13. The method of claim 12 including the further steps of:
- (i) generating a third request from said originating multimedia desktop device to said communications server to commence communications with said destination multimedia devices;
- (j) generating an allocation request from said communications server to said quality of service manager to allocate said resources;
- (k) generating an update request from said quality of service manager to said resource status databases to record the allocation of said resources;
- (l) issuing a connection command from said communication server to said destination multimedia computing device to establish said communications.

14 The method of claim 12 including the further steps of:

- (i) generating a third request from said originating multimedia desktop device to said communication server to notify when said desired quality of service becomes available;
- (j) generating a fourth request from said communication server to said quality of service manager to monitor said resource status databases;
 - (k) monitoring said resource status databases until said resources become available;
- (l) generating a third response from said quality of service manager to said communication server when said resources become available;



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- (m) generating a fourth response from said communications server to said originating multimedia device of availability of said desired quality of service.
- 5 15. The method of claims 12, 13 or 14 wherein said desired quality of service is bandwidth.